Welcome Back!

We would like to welcome Charlie Pender back to Cabrillo. Charlie was the Physics Lab Tech for many years and retired in 2003. Since then he has become very interested in manufacturing including traditional machining, CNC machines, and 3D printers. He has become our Engineering Department's resident expert in 3D printing. Thanks, Charlie, for joining our team.
**Student Clubs**

The engineering student clubs having been doing amazing things including designing a building a drone to running the after-school engineering clubs at two middle schools. Come join one of the clubs: Engineering Society (ES), Engineering Abroad Club (EAC), Robotics Club (RC), Engineering K-12 Outreach Club (EOC), Women in Science and Engineering (WISE), Latinos United at Cabrillo in Engineering and Science (LUCES) Society of Hispanic Professional Engineers (SHPE), Bike Co-op, and Sustainability Club. Check out the STEM Student Club web site below for details and contact information.

**STEM Student Clubs:**
http://www.cabrillo.edu/services/stem/Student_Clubs.html

**Robotics Club:**

![Robotics Club Image](image)

Aaron Heagerty: Founder and Past President
Kyle Park: Current President
Angel Martinez: Current VP

Club founded in 2013.

The Robotics Club is designing and constructing a quadcopter. One function of the drone will be to take aerial video and photos of Cabrillo's Engineering Abroad humanitarian work in Guatemala. Structural Components designed on PTC Creo and 3D printed on campus, soldered and assembled in house by Aaron and Angel, configuration of the remote and wiring collaboratively.

**LUCES Engineering Outreach**

During the 2014-15 school year, LUCES met their club aspirations by implementing two outreach projects that impacted local Latino youth by increasing their exposure to engineering and science. During their first project, LUCES worked with children from local Santa Cruz elementary and middle schools during the 'Tarde de Ciencias' program of the family resource center, called Community Bridges, in the Beach Flats area of Santa Cruz. The children designed and built spaghetti structures and paper bridges and learned about the physics behind lava lamps. The second project involved middle school children at Alianza School in Watsonville. The Alianza project included a short lecture by the LUCES members, about the science and engineering of wind power, then LUCES members guided the students through designing, building and testing small scale wind turbines, made from cork, bamboo skewers and cardstock.

**B40 Middle School Outreach**

During May 2015, Cabrillo engineering students ran the Branciforte Middle School After-School Engineering Club in Santa Cruz. The club exposed 40 middle schoolers to many fields of engineering through hands on design projects. Well done to the following engineering students: Mauricio Rivera, Jacqui Mendoza, Garret Mason, and Teralyn Crill. They received training on 3D printing from the Makers Faculty in exchange for their work at the school.
Engineering Abroad

Fifteen engineering students along with Kelli, Karl and Brandon Faria (TA) traveled to Guatemala in January 2015 for an engineering experience and cultural exploration. The students designed a water storage supply system to expand the village of Vuelta Grande’s water supply. The Engineering Abroad Club raised $9,000 for the excursion. The students on the 2015 excursion were Nathan Wahler, Eric Wells, Josh Sylvia, Evan Langer, Thomas Martinez, Melissa Jimenez, David Vaiz, Janaye Marshall, Shae Connor, Kalika Diaz, Pablo Tejeda, Jose Flores and Jack Fogelquist. Visit the Engineering Abroad web site to learn more. A third group of students have been chosen to return to Guatemala in January 2016 for another engineering project.

Santa Cruz Children’s Museum of Discovery (MOD)

The ENGR 3 Statics students for their design project designed science/engineering exhibits for the newly-created Museum of Discovery located in the Capitola Mall. Exhibits included Chaotic Pendulum, Gears, Pendulum Wave, Electric Fleas, Levers, Pulleys, Shock Absorbers, Soil Liquefaction, and the Magnetic Maze Table pictured below.

Girls and Boys in Engr Camps

This is the fourth summer that we will offer middle school girls and boys engineering programs to explore engineering through hands-on projects. Thanks to the amazing teacher Rhoxanne Morris (alum) and thanks to the peer leaders Mitasha Malhan, Kalika Diaz, Shae Finnegan, Melissa Jimenez, Jaqui Mendoza, Diana Santiago, Mitasha Malhan, Teralyn Crill, Valerie Otazu, Isabel Corpus, Chelsea Welch, and Vianca Martinez.
Congratulations to the following students!

**Engineering Department Scholarship**

**$6,700 S-STEM Scholarship**
Melissa Jimenez, Chelsea Welch, Isabel Corpus, Gracie Harder, Taralyn Crill, Jose Olvera, Kalika Diaz, Pablo Tejeda, Santiago Delgadillo, Sarah Kalman, Tryston Cruz, Maria Ramirez, Josh Sylvia, Jose Flores-Martinez, Amanda McDonald, Melissa Pardo, Chris Reinoldson, Antonio Hernandez, Cynthia Hueso.

**Women in Engineering Brunch**
Cabrillo female engineering faculty and students gathered with female alums to bond over food and great conversation. It was wonderful getting us all together!

**Declared Major/ Education Plan**
Be sure to declare yourself as an engineering major and get an education plan. You can meet with Kate Disney, Rudy Puente (STEM/MESA Counselor) or Davina Walker (STEM/MESA Counselor) to set up one.

**Engineering Physics and Computing 800 Building**
Thanks to the US Department of Education, Monterey Peninsula Foundation, Jack and Peggy Baskin, and Cabrillo College for funding our new Engineering, Physics, and Computing building which houses all new classrooms, labs and the awesome 5,000 sq. ft. STEM Center where you can receive free tutoring and participate in course workshops. It even has a kitchen. It’s our home away from home!

**Engineering Department Orientation**
Tuesday, August 25, 2015 6:00 – 8:00 pm will be our Welcome Back event in the STEM Center, Rm 834, inviting you and your family and friends to learn about the engineering program, renew friendships, and meet new friends. We will discuss courses, scholarships, financial aid.

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$ **FINANCIAL AID** $

We can’t say more about how **important** it is to apply for financial aid. The more financial support you get, the more time you can devote to your studies, and the better you’ll do in your classes. The Financial Aid office is very busy at the start of the semester, but right now and during the middle of the semester, they are slower.
Cabrillo College Engineering Program

Cabrillo College’s engineering program began in 1960, the second year of the college’s operation. Cabrillo College offers a complete lower-division engineering program that prepares students for transfer with full junior standing to four-year engineering colleges in California and across the US. Cabrillo is the only community college in the tri-county area (Santa Cruz, Monterey and San Benito) that presents a complete lower-division engineering program.

First Semester at Cabrillo:

<table>
<thead>
<tr>
<th>Course</th>
<th>Note</th>
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<tbody>
<tr>
<td>MATH</td>
<td>the math course you assess into</td>
</tr>
<tr>
<td>ENGLISH</td>
<td>the English course you assess into</td>
</tr>
<tr>
<td>ENGR 5</td>
<td>(information below)</td>
</tr>
<tr>
<td>ENGR 25</td>
<td>as long as you have successfully completed high school geometry or Math 3 or Math 4</td>
</tr>
<tr>
<td>CHEM 3/3L</td>
<td>take if you haven’t taken high school chemistry</td>
</tr>
<tr>
<td>or CHEM 1A</td>
<td>take if you have taken high school chemistry</td>
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</table>

Curious about a Career in Engineering?

Enroll in the ENGR 5 Engineering as a Professional course!

Fall 2015 Semester:

<table>
<thead>
<tr>
<th>Course</th>
<th>Note</th>
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</thead>
<tbody>
<tr>
<td>ENGR 12</td>
<td>Tuesday 6:00pm-9:05pm Aptos Campus Rm 810</td>
</tr>
<tr>
<td>ENGR 1A</td>
<td>Monday 6:00pm-9:05pm &amp; 9:15pm-10:05pm Aptos Campus Rm 810</td>
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Interested in Mechanical or Civil Engineering?

Get some industry experience now. Cabrillo College offers ENGR 12 Machining Processes for ME/AE/IE majors and ENGR 1A Surveying class for CE/SE/ArchE majors.

Engineering Transfers

Congratulations to all the engineering students who transferred this year!

Important Websites

Engineering Department: [http://www.cabrillo.edu/academics/engineering/](http://www.cabrillo.edu/academics/engineering/)

Engineering Abroad: [http://www.cabrillo.edu/academics/engineering/engrabroad/](http://www.cabrillo.edu/academics/engineering/engrabroad/)

STEM: [http://www.cabrillo.edu/services/stem/index.html](http://www.cabrillo.edu/services/stem/index.html)

MESA: [http://www.acbrillo.edu/services/mesa](http://www.acbrillo.edu/services/mesa)

STEM Student Clubs: [http://www.cabrillo.edu/services/stem/Student_Clubs.html](http://www.cabrillo.edu/services/stem/Student_Clubs.html)